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Q&A: With Congressman George E. Brown Jr.

House Science Chairman on Japan, SSC, Pork, Etc.

Rep. George E. Brown Jr. (D-California), a 26-year veteran of the House, became Chairman of the House Science, Space, and Technology Committee last December. Brown spoke with SGR Editor Greenberg on November 6. Following is the text, transcribed and edited by SGR.

SGR. *The US has had no success in getting Japan to help pay for the Superconducting Super Collider (SSC).*

Brown. Let's be realistic about the Japanese. The Japanese have the money. They are embarked on a course of supporting basic research. This is a high priority for them. They want to get in with the big boys in the global race, to be seen as a patron of civilization by supporting basic research. On the other hand, they are the most hardnosed and pragmatic people that you can envision.

SGR. *But why not contribute to the SSC?*

Brown. The United States has just rejected their gift of a \$17 million supercomputer [offered by Fujitsu Ltd. to the Colorado-based Model Evaluation Consortium for Climate Assessment], because we don't want them butting into our supercomputer market. We introduce legislation, including the Advanced Computer Act, which has totally unacceptable buy-American provisions in it. We're asking them to support and cooperate in the development of the Advanced Fusion Reactor. On the other hand, we accepted the gift from the Japanese of several largescale computers to be used for accessing Japanese scientific literature. We are not following a coherent policy.

We've got a whole bundle of issues on the table with the Japanese. Is there any reason why they shouldn't have a little linkage? Well, they're looking for linkage. I predict that, given an Administration which understands all of the issues that are on the table with the Japanese, we can come to a meeting of the minds. We probably will end up contributing a billion dollars to research going on in Japan and they'll end up contributing a billion dollars or more to the Super Collider.

SGR. *How will we contribute a billion to Japan?*

Brown. You can find some program, such as Japan's proposal for Intelligent Manufacturing Systems, which would be a multi-billion-dollar program [for which the US plans to join in a feasibility study next year]. The Japanese proposed to do this themselves to start with, but because of its overriding importance to the entire industrial world, it's now become a global, international program, with Japan picking up 80 percent of the cost. There's no reason on earth why, in a multi-billion dollar program of global significance where the

Japanese are the leaders, we shouldn't make a modest contribution. We're allocating the money. There's money for this in the Defense bill, for example. Let us assume that the global Intelligent Manufacturing consortium ends up with an overall cooperative budget of \$10 billion, 80 percent of it funded by the Japanese, the other \$2 billion, half from Europe, half from the US. Here's our \$1 billion contribution, and the Japanese are going to say, "That looks very nice to us. You're doing the world's leading work in advanced high-energy physics. We'll chip in a billion for that, or more." And we'll see how it works out.

SGR. *Meanwhile, the SSC's finances are increasingly precarious.*

Brown. The trends are not good, but I don't think you would argue that at some point, we don't want to continue new approaches to understanding the ultimate nature of the universe. And there's only one thing that does it, it's the
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In Brief

After a slow start, NSF reports progress in encouraging more American researchers and science and engineering students to study and work in Japan, but sources at the Foundation tell SGR of a new source of dismay: Returnees from these programs say time in Japan counts for little in getting academic or industrial jobs in the US.

How well did the CIA perform in assessing the state of the Soviet economy throughout the Cold War? Not well at all, according to a new report by the General Accounting Office. It's a tough problem, the GAO concedes, but adds that the "CIA's estimating methods, however defensible, are unlikely to produce accurate results." In general, the GAO says, the CIA overestimated the size and growth of the Soviet economy. Copies of the GAO Report, "Soviet Economy" (GAO/NSIAD-91-274, 51 pp.), are available without charge from: USGAO, PO Box 6015, Gaithersburg, Md. 20877; tel. 202/275-6241.

The House and Senate have agreed on a \$9 billion budget for the National Institutes of Health for the fiscal year that began October 1 (they're running late as usual). That's an increase of about \$750 million over last year. The biggest gainer was the National Cancer Institute, whose budget rises to \$2 billion, an increase of \$275 million. The Appropriations Conference report directs NCI to "make breast, prostate, ovarian, and cervical cancer its top priorities and treat these diseases with utmost urgency."

... NIH Funding Complaints "Are a Bunch of Garbage"

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Super Collider.

SGR. *Nobody argues about that. The question is, at the price of what?*

Brown. It's a matter of priorities. This is the worst possible time to be funding it. Three-hundred-plus-billion-dollar deficits, and you want to create the world's most expensive science machine. If it becomes clear that we're not on a trajectory which is more optimistic in terms of budget deficits, and we're forced to make a decision between funding the SSC or cutting to the bone other kinds of research, the SSC is going down the tubes. I don't think you can alienate New Jersey and Illinois and California and half a dozen other states by cutting physics projects important to them and give it all to the SSC in Texas. This is not based on a scientific judgment. It's a political judgment.

SGR. *Is it conceivable at this stage that the SSC could be terminated for financial reasons?*

Brown. Of course, it's conceivable. But the other side of the coin is that the SSC enjoys the wholehearted support of the President and a large segment of the scientific community. It has been endorsed, with qualifications, by both the House and Senate. There's hardly a scientific program of any kind that has that kind of a base from which to determine whether we move forward or not.

SGR. *The House endorsed it in 1990, but the bill was never taken up by the Senate.*

Brown. True, but the Senate has spoken with appropriations for the SSC. This is another point. We haven't passed an authorization bill for civilian research in the Department of Energy for 15 years. You can't use that failure to attack the SSC. We're going to correct that, too.

SGR. *There's no bill because three committees claim jurisdiction over energy research.*

Brown. Leave it to me. Trust me.

SGR. *There is an understanding that one-third of the SSC's costs will come from non-federal sources and that the SSC will not cut into support for other fields of physics.*

Brown. This was the posture that our Committee took. It's a tough posture. And the House endorsed it. That commitment was made by the Administration.

SGR. *But the Townes Committee [on Energy Research Priorities, convened by DOE, chaired by Nobel laureate Charles Townes (SGR November 1)] wrote out a priority list that indicates the SSC is eating up the other budgets.*

Brown. Something has to go under a mandate of zero growth. If you add 5 percent, then you can have it.

SGR. *Every other claimant for DOE's money can say the same.*

Brown. Such a statement is either a pipe dream or its realistic, depending upon what the underlying factual situation is. DOE has just pooped off two or three billion dollars trying to restart Savannah River [nuclear weapons plant], which doesn't need to be restarted and probably won't be

restarted. Well, if they can poop off two or three billion dollars for that, then they can find two or three hundred million, one tenth of that, for the maintenance of the ongoing science programs in these other states.

SGR. *NSF has fared very well this year in its budget.*

Brown. By accident. Mr. Traxler's Subcommittee [on appropriations for NSF, chaired by Bob Traxler (D-Michigan)], in its creative efforts to develop a coalition against the Space Station, decided that they would fully fund NSF and make NSF aware that this was only being done because they were able to cut out the Space Station.

SGR. *Not out of affection for NSF?*

Brown. They have a real affection for NSF. But that doesn't keep them from cutting their budget. Instead of making a realistic effort to develop a balanced appropriations bill in which those things which shared a common interest were cut in a common way, they decided to try to build a coalition to sink the Space Station. I admire them for it. Excellent work.

SGR. *You've observed that the National Institutes of Health has had the most impressive, steady growth of the federal research agencies.*

Brown. All the indicators show that.

SGR. *And that NIH also complains the most about funding.*

Brown. Don't quote me on this.

SGR. *We only talk on the record.*

Brown. I love biological research. I think it's extremely important and is at the root of our global superiority in those advanced technology and applications fields that are based on biological research. I therefore continue to support a healthy growth in biological research. Now, the complaints coming from the health field, or the biological research field, that they are inadequately funded, I think are a bunch of garbage. The thing that ticks me off the most is the fact that the ultimate justification for this generous funding stems from the contribution of the biological sciences and the health sciences to national health. And we have the poorest record in that field of any major industrialized

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Science Committee: Long on Jurisdiction, Short on Power

Chairman George Brown's Science, Space, and Technology Committee (SS&T) nominally holds a great deal of authority in Congressional science affairs but, paradoxically, it possesses little power to move or block events.

Brown, a career-long science *aficionado*, is one of Capitol Hill's most knowledgeable members on research matters, and enjoys a respect that exceeds the muscle power of his Committee. He aims to make the Committee a formidable power in science affairs. After nearly a year at the helm, stirrings are evident, but on the Congressional power meter, little has changed.

The SS&T Committee's jurisdiction is broad, encompassing NASA, the National Science Foundation, the National Institute of Standards and Technology, the National Weather Service, non-military labs of the Department of Energy, R&D in the Environmental Protection Agency, and, vaguely, the general health of science.

Prominently absent, however, are the Pentagon, the National Institutes of Health, and the Department of Agriculture, which together finance at least 75 percent of federal R&D. Brown's Committee has jurisdiction over the DOE's Superconducting Super Collider, but DOE research also belongs to the Committees on Energy and Commerce and on Interior and Insular Affairs.

But even within its unchallenged areas of jurisdiction, the SS&T Committee's role is limited. It is an authorizing Committee, which means it writes laws saying this or that should (or should not) be done, at no more cost than a specified amount. But the power to provide money is held by the Appropriations Committee, and, in practice, by the Appropriations Subcommittees.

Under the zero-sum rules that govern domestic budgets, the main battle is for money rather than laws authorizing new programs—for which money is nearly nonexistent.

A complicating factor is the absence of jurisdictional

symmetry between authorizing and appropriations committees. The Appropriations Subcommittee with jurisdiction over NASA, NSF, and EPA must also share its budget allotment with two politically powerful social-welfare Departments, Housing and Urban Development and Veterans Affairs. For formulating research priorities, it makes no sense, but there it is: Scientific research programs in direct competition with veterans and the homeless.

The authorizing function would seem to be integral to the legislative process, but in reality it is often ignored. Authorized programs are often not funded, while funded programs often proceed without specific authorizations.

For example, the much-battled over Superconducting Super Collider, with a budget of \$510 million this year, has never been specifically authorized by Congress. The House passed an authorization last year, but the Senate never took up a similar measure. Legislatively, the SSC is riding on the basic legislation that created its sponsor, the Department of Energy.

Last summer, after the House had passed the SS&T Committee's authorization for the Space Station, the Appropriations Subcommittee for NASA voted to terminate the project in favor of NSF, housing, and veterans. Brown led a successful rescue effort, but the episode again demonstrated the uncertain role of authorizations in Congressional affairs.

Brown, 71, visibly relishes the SS&T Chairmanship. Under his leadership, the Committee has become more focused, active, and noticed in House affairs. Brown, now in his 26th year in Congress, speaks openly of his designs to raise the Committee's power and importance. It is not impossible. The Armed Services Committee, for example, is an authorizing Committee with great punch in military affairs.

With a few exceptions, however, similar power has eluded the Science, Space, and Technology Committee.

Q&A: Chairman Brown

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country. Why all these researchers don't recognize that they're being funded for a contribution to human welfare rather than their welfare boggles the mind.

SGR. *Bernadine Healy [Director of NIH] points out that the number of applications for NIH support and the number of grants awarded have been pretty much on a plateau in recent years and that the biological-research establishment has not been growing [SGR November 1].*

Brown. She should know this better than I would. She keeps up with the figures. I know what the overall growth in NIH research funding is, and it's a model of what I think is desirable to maintain the healthy growth in a research field. Now, whether that keeps up with the ups and downs in

researchers I wouldn't be able to say. But there's a lot of flexibility in a system like that. They've demonstrated that in response to complaints from the researchers that they're spending too much time writing applications and that their grants weren't large enough and were too short. They made the necessary changes. And then what do the researchers do? They complain that they now don't have enough money to finance all the new people that they'd like to bring in—to create more pressure on the system.

SGR. *You are on a campaign against earmarked appropriations for scientific projects.*

Brown. We've written a letter to Whitten [Rep. Jamie Whitten (D-Mississippi), Chairman of the Appropriations Committee] raising the issue of earmarking, with copies to all of the Chairmen of the authorizing committees. And

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... Manpower Data Reflect "Cultural Bias" for Growth

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we've sent a copy to the Speaker and asked for an opportunity to meet with him to discuss it. We are in the very early stages of trying to see if there's a consensus about a possible course of action. We discussed it at some length yesterday with the Subcommittee Chairmen, and they are 100 percent in support of getting to do something that is realistic and that hopefully will gain considerable support.

SGR. *This letter went to some of the leading earmarkers.*

Brown. It went to the Chairman of the leading earmarking Committee [Appropriations]. It also went to the authorizing committees, which are the largest complainers about earmarking. Although, all of us are guilty, and I've confessed myself in my letter to Jamie [Whitten] that I have been guilty of sin on occasion when there appeared to be no other way to achieve a reasonable goal. But I lamented the necessity of doing that, and what it makes us all into. I won't use the word prostitutes, but special pleaders, at least, in which we sell our souls to the Appropriations Committee for a few crumbs. And the Appropriations Committee encourages it. They know they have to build a coalition for their legislation. Their customary practice is to consult with those people that they think might have an adverse impact on their own legislation. And they suggest is there anything you need that would be helpful if they could put it into their bill. That's standard practice. It's regrettable, but it operates that way.

SGR. *How can you eliminate something so fundamental to the way Congress operates?*

Brown. I'm a firm believer that we will probably continue to spend about the same amount of money and that it may end up going to about the same number of places, but that there is a demand for a sense of fairness to the participants. Right now, the system is not fair. You've got 50 or so members of the Appropriations Committee that are equal to all the other members, except they're a little more equal. And everything channels through them, instead of the dual process envisioned by our rules. And even more so, in the case of the Senate. The comity between the two branches which is required is totally overridden by the Senate in the way they put earmarks in the appropriations bills. You've got to look very broadly at this in terms of restoring some degree of balance which allows for the fair and equitable participation of all the members, who are, after all, under the Constitution, equal members of this Congress.

SGR. *The latest annual count for earmarks is about \$500 million, a small slice of total federal support for basic research. Maybe 5 percent. It's a minor tax that seems to keep a lot of people happy. It overrides a sense of injustice toward the orthodox way of awarding funds.*

Brown. I'm not trying to be doctrinaire or dogmatic about this. Every system has got to have a few release valves. These are release valves. And I think if kept within moderation, that we can live with it. But what I see, however, is a trend in which there is less and less balance in the system,

more and more release points controlled by a relatively select number.

SGR. *The manpower specialists are in conflict over whether we're headed for a shortage or surplus of scientists and engineers.*

Brown. I look on it as a legitimate subject for investigation and policy determination. Our Investigations and Oversight Subcommittee feels exactly the same way, that the manpower statistics, while not being exactly corrupt in science, are being interpreted in such a way as to necessitate certain policy—that is, producing more. Over at OMB, they've come to the same conclusions, that the statistics are being misinterpreted to require more.

SGR. *More fellowships and training?*

Brown. More effort to train the next generation of scientists. I get a little nervous when [Chairman] Howard Wolpe [D-Michigan] and his Oversight Subcommittee and OMB both come to the same conclusions. I don't think there's anything criminal or culpable here, but what I do see is the possibility that there's a certain cultural bias at work here, and that we ought to investigate it. It shouldn't be investigated in the sense of pointing the finger at anybody, and saying, "You have corruptly manipulated otherwise reasonable figures." Because, it's not that kind of a game. It's a cultural bias, and you have to approach cultural biases in a different way from that. There's nothing illegal, immoral, or corrupt about what they're doing. It's just that they have inadequately managed a statistical problem which is extremely complex.

SGR. *After thinking about it for 35 years, NSF has given the social sciences their own Directorate at the Foundation [SGR November 1].*

Brown. A very modest step in the right direction.

SGR. *What moved them?*

Brown. About 10 years of political pressure. Not just from me or the Congress, but from the entire academic community. The resulting increase in funding for the social sciences isn't coming just from this reorganization. They're on an upward trend anyway. I think you may say that this is more recognition of the fact that they're on an upward trend and this is intended to allow them a slightly larger voice, possibly, or a higher degree of recognition. Whether it will correlate with an increased rate of growth in their funding at NSF, I would say is highly dubious.

SGR. *Some leaders of research say large budget increases are essential to keep American science in good shape.*

Brown. I think we're spending roughly the proper amount of money on R&D, in terms of total federal expenditures, but it's misallocated. We're not spending enough on civilian-oriented R&D. And, here again, it may even in the civilian sector be misallocated. But we need to come to a more effective balance within the resources that we're

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... A Nod Toward a National Technology Foundation

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currently devoting.

SGR. *Is the balance between military and civilian research a sensible one at this time?*

Brown. I assume that we will continue to see a reduction in the military budget. The question is, over the next five years, will it, say, be a 25 percent or a 40 percent reduction? I think those are the two extremes. It's likely to tend toward the 40 percent reduction. That will show up in the military R&D largely as a reduction in the "D"—in the development of large weapons systems. The basic research, the applied research, and the initial development can continue healthy, and maybe even grow. In the kind of environment we're in, it would be a mistake to reduce the appropriate R&D at a level equal to or greater than we do the total military budget.

Now, within that R&D in the military, I assume that the Bingaman [Senator Jeff Bingaman (D-New Mexico)] language in the Defense bill is going to create an environment for more support of dual-purpose [military and civilian] research, which I think is healthy. I would like to see any savings in the military R&D gradually reflected in increases in the civilian R&D, so that the total R&D investments are not substantially disadvantaged as a result of it. Until we get our civilian investments up to a level approximating what our competitors are doing, we're still going to suffer some disadvantage. That's a convenient benchmark, not because I think there's anything intrinsic in it.

We still have by far the largest research establishment in the world. We are capable of competing in any field of research in the world. But if we allow that to deteriorate, we will gradually be nibbled to death by a more effective use of research resources among our competitors. Other factors include getting our budget balanced, doing a more effective job of shortening the cycle from applied research on through commercialization, making more appropriate capital investments, allowing for closer cooperation between industry segments. In a lot of things of that sort, the culture is the problem, not our investments in R&D.

SGR. *This Committee helped create NIST [National Institute of Standards and Technology, formerly the National Bureau of Standards], and gave it major new responsibilities for promoting civilian technology. But the funding has been very sparse.*

Brown. We grafted NIST onto the old National Bureau of Standards, because it seemed to be the most logical place to graft it, not necessarily the best. There has been a positive change in the attitude of the Administration toward the job that NIST is doing. They are doing an effective job. It's still at a level which is inadequate to the problem. Their budget [\$47 million] for the Advanced Technology Program [which helps finance industrial consortia for developing generic technologies] is still far less than DARPA [Defense Advanced Research Projects Agency, with a budget of \$1.4

billion] or some of the other agencies, and ought to be increased.

On the other hand, you don't automatically create a viable program by throwing money at it. So, I think you need to very carefully consider how that money is going to be spent. But I give very high marks to NIST for slowly developing a very good, solid program, and excellent relationships with the private sector, which we always knew they were good at. Now the question is, how good is their judgment with regard to what the national needs are in terms of investment? They start out with a major commitment to improving the manufacturing technology. Everybody says that's necessary. But what are they going to do about other things that are also on the list of two dozen or more critical technologies? Do they have similar expertise? And they don't. So, the question can arise, is this the best mechanism to use for critical electronic technologies that are coming down the road—high-definition television, whatever you want to name? And it may not be.

SGR. *If not NIST, what?*

Brown. There's no place else in the government. This would be a program which essentially is new to our culture, to our bureaucracy. So, should we go back to do what I suggested 10 or 15 years ago, and create a National Technology Foundation, or some other mechanism of that sort?

SGR. *When you proposed that, NSF and its constituents immediately rose up in opposition.*

Brown. They saw it as a diversion of R&D resources to this heretical, unimportant, insignificant field of helping our nation become proficient in advanced technology and commercialization. I think they're changing their mind a little bit. NSF, again to the credit of Mr. Bloch [Erich Bloch, NSF Director, 1984-90] has moved in a responsible way to encourage some of those things most closely related to the NSF mission.

SGR. *There are proposals to extract DARPA from the Pentagon.*

Brown. I think that's reasonable, but not at this time. You're going to have to wait five years to see what happens to the overall military structure. It may get to the point where it can no longer maintain a billion-dollar-a-year, or whatever, DARPA strictly out of its own funding. We may at that time, considering the overall value of DARPA for the national economy, decide that we need a separate structure for DARPA.

SGR. *Your Committee is supposed to help shape space policy, but the appearance from the outside is of a very paternal, uncritical relationship with NASA.*

Brown. Do you see it as being any more paternal than what the Agriculture Committee has for agriculture? There is that culture around here of close, frequently uncritical relationships with the agencies that you have jurisdiction over. We do have a close relationship. I don't think it's uncritical, however.

Academy Aide Guilty of Stealing Foreign Travel Funds

A National Academy of Sciences (NAS) employee responsible for supplying visiting Eastern European scientists with cash for expenses has pleaded guilty to helping himself to \$105,067 from 1987 until he was caught last April.

The episode would normally be relegated to the annals of petty crime. But it illuminates an odd style of doing business at the nation's premier scientific institution. At the National Science Foundation, source of the Academy's bankroll for the foreign visitors, the word in the Office of the Inspector General is that the thefts reveal "very poor internal controls" at the Academy. In this instance, controls appear to have been non-existent.

The defendant in the case is David A. Berrien, a staff member in the Academy's Office of International Affairs. Since 1986, according to an Academy spokesman, Berrien's duties included Saturday rendezvous at Washington airports with incoming Eastern European scientists on their way to various destinations in the US under exchange programs administered by the Academy.

Because hard currency is scarce in the home countries of these visitors, the NAS spokesman explained, the Academy furnished the arriving visitors with \$1950 each in cash, the first month's stipend for their stay in the US. To obtain the cash for the visitors, Berrien would fill out a voucher, which was to be signed by a supervisor, and obtain a check made out to David A. Berrien. Proceeds from the checks were supposed to be given to the arriving visitors, who were then to proceed on their way.

The number of visitors was 20-25 per year at the outset and later rose to 50-60, the Academy says. Since 1986, NSF has provided \$4.6 million for the program.

Last April, the NAS spokesman said, Berrien's supervisor found that a voucher bore a forged signature and the name of a non-existent visitor. The FBI was summoned, and when Berrien was confronted, the spokesman reported, he confessed and was immediately dismissed. Charged with theft from a federally funded program, he pleaded guilty in US District Court. Sentencing was originally scheduled for November 7, but was rescheduled for November 15 to work out a plan for restitution of the funds.

The Academy says that the missing funds have been restored to NSF and that under new procedures, funds are sent directly to the host institutions of the foreign visitors. "No Academy employee handles the funds," he said.

NIH Funds 3 Older Citizens Centers

The award of \$3.8 million to establish the first three Claude D. Pepper Older American Independence Centers has been announced by the NIH National Institute on Aging. The Centers, designed to conduct studies on preventing and reducing disabilities that reduce the independence of older people, will be located at the University of Rochester, UCLA, and the Bowman Gray School of Medicine, Winston-Salem, NC. Congress authorized the Centers last year.

Sharing the Costs of Science

From an address, "Functions and Resources: The University of the Twenty-First Century," by Harold T. Shapiro, President of Princeton University, October 6, at the University of Chicago.

... the increasing internationalization of the world economy raises new issues regarding the equitable sharing of the world-wide costs of basic research. Since our trading partners are characterized by quite different institutional arrangements for the production of basic research and somewhat different spending priorities, it is not clear at what prices basic research findings should cross national borders. In our own case, we are committed to free access to basic research results. Indeed, we believe the resulting openness is key to the ongoing strength of our own research enterprise.

Other countries, however, have different arrangements, and there is now some feeling that we are not only funding more than our share of the global effort in basic research but allowing it to flow abroad at prices which are disadvantageous to us. It may be necessary to deal effectively with this issue—and associated issues of intellectual property rights—if we are to sustain the necessary level of public and private support for the university-based research enterprise. . . .

Increased openness . . . would provide greater flexibility to all countries and the resultant dividends of some specialization. Fully harvesting these dividends, however, will require serious modification of existing arrangements in many countries. The resolution of this issue could have profound effects on our own national priorities for the support of research and impact both the size and nature of our national commitment to basic research and our support of the university research system.

Congress Pushes Critical Tech Institute

The White House doesn't want it, but Congress is insisting on the establishment of a Critical Technologies Institute as an appendage to the Office of Science and Technology Policy. The proposal, originated by Senator Jeff Bingaman (D-New Mexico), is designed to put heat on the Administration to push the development of hot technologies for civilian and military purposes. The White House has yielded a bit on this goal—which it usually denounces as "industrial policy—but doesn't see the need for a Congressionally mandated Institute to guide its hand. In any case, Congress has appropriated \$1.6 million for the Institute. The next move is up to the White House.

Full Budget for Space Station Hits NASA Programs

Science agencies fared generally well in the Congressional session now coming to a close. But there was one major exception, NASA. In tradeoffs to salvage the Space Station, NASA suffered damage that is likely to reverberate throughout the space program for years to come.

NASA came to Congress this year with a budget request of \$15.7 billion, including \$2 billion for the Space Station. The House Appropriations Subcommittee for NASA, more inclined to its jurisdictional responsibilities for housing and veterans affairs, simply sliced out that \$2 billion and told NASA to terminate the Space Station. The full House, however, restored the money. But since budget ceilings are fairly rigid under the so-called summit agreement, something had to go—and NASA's request of \$15.7 billion was cut back by \$1.4 billion in the final bill.

As a result, the Space Station sails on, but to pay for it, there has been a savaging of numerous other programs in NASA. The would-be terminator of the Space Station, Rep. Bob Traxler (D-Michigan), Chairman of the NASA Appropriations Subcommittee, spelled out the damage in floor debate on October 2. NASA was effectively out of the National Aerospace Plane project, he noted. Some \$330

million has been cut from Shuttle operations, and funds were denied for the Space Infrared Telescope facility, which, he noted, "was the highest single recommendation of the National Academy's Astronomy Committee to be funded in the 1990s." Several other major projects, Traxler said, were either killed or delayed to accommodate the full request for the Space Station. In addition, NASA salaries and operations were reduced by \$175 million, he said.

As difficult as the present situation is, Traxler warned, the projects that were retained will encounter an even grimmer budget situation next year. "We are again fitting a size 12 foot into a size 9 shoe," he said.

Job Changes & Appointments

John Holmfeld, a 20-year staff veteran with the House Science, Space, and Technology Committee (SS&T) and its predecessors, has been appointed Executive Director of the Washington-based Council of Scientific Society Presidents. Founded in 1973, the Council has a membership of 58 heads of scientific and professional societies.

Also on the SS&T Committee: **Robert E. Palmer**, a staff member since 1979, has been appointed Senior Policy Coordinator for the Committee. **Keith Laughlin** succeeds Palmer as Staff Director of the Subcommittee on Investigations and Oversight, chaired by Rep. Howard Wolpe (D-Michigan), for whom Laughlin has worked as a staff member since 1979.

Maureen K. Byrnes, former Executive Director of the National Commission on AIDS, has joined the staff of the Association of American Universities, where she will be Director of Government Relations for Biomedical Research. She succeeds **Carol Scheman**, who was appointed a Deputy Commissioner of the Food and Drug Administration in September.

In Print

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ing is prevalent in the workplace, and says the practice raises issues of job discrimination, privacy protection, and insurance coverage.

The data are from a survey reported in a 1990 OTA publication (also available): *Genetic Screening and Monitoring in the Workplace* (GPO Stock No. 052-003-01217-1: 262 pp., \$12).

Order from: USGPO, Superintendent of Documents, Washington, DC 20402-9325; tel. 202/783-3238.

Bureau of Mines Research: 91 (160 pp., no charge), written for a general audience, with color illustrations, describes the research programs of the US Bureau of Mines. Included is a bibliography of research supported by the Bureau.

Order from: US Bureau of Mines, Office of Public Information, Washington, DC 20241; tel. 202/501-9650.

Encouraging Technology-Based Economic Development in Wisconsin (30 pp., no charge), final report of the Governor's Science and Technology Council, presents a series of recommendations, many focused on biotechnology, for stoking the state economy by encouraging high-tech enterprises, improvements in science education, and collaboration of industry, universities, and state agencies.

Order from: Wisconsin Department of Development, 123 West Washington Ave., PO Box 7970, Madison, Wisconsin 53707, attn. Virginia Ragatz; tel. 608/266-8525.

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In Print: Industry Group Says Science Is Overfunded

The publications listed are obtainable as indicated—not from SGR.

Restoring Manufacturing Competitiveness: Why Current Research and Development Priorities Should be Changed (26 pp., \$20), for the science establishment, a heretical, challenging tract from the Washington-based Manufacturers' Alliance for Productivity and Innovation (MAPI), founded in 1933 and claiming 500 member companies. MAPI says the federal government is overspending on the life sciences and basic research, to the detriment of research-based improvements in manufacturing capabilities. "Since 1970," the report states, "the life sciences have grown from 30 percent to 40 percent of federal research funding while engineering research has decreased from 30 percent to 20 percent of federal research funding. Mathematics and computer science have never had more than a 4 percent share of the federal research budget," it states, adding: "In times of continuing general budget deficits, the large investment in basic research is likely to come under more scrutiny amid demands that this investment be justified."

Order from: Manufacturers' Alliance for Productivity and Innovation, 1200 18th St. NW, Washington, DC 20036; tel. 202/331-8430.

Scientific Manpower (No. 60, 170 pp., no charge), text of a brief hearing, plus supplementary material, held last July by the Subcommittee on Science of the House Science, Space, and Technology Committee, on the increasingly disputed issue of whether surplus or shortage lies ahead in the supply of scientific and engineering manpower. Taking part were witnesses from academe, government, and professional organizations. The proceedings brought out that the statistical base for manpower studies is pretty shaky and that performance of forecasting models is not reassuring. A representative from NSF, which assembles the basic manpower numbers, described plans for improvements.

Also from the House Science Subcommittee: **Fiscal 1992 and 1993 National Science Foundation Authorization** (No. 22, 645 pp., no charge), the text of three days of hearings held last February, with over a dozen witnesses from NSF and various universities discussing the Foundation's programs and budgets in considerable detail.

Order from: House Science, Space, and Technology Committee, Publications Office, 2320 Rayburn Building, Washington, DC 20515; tel. 202/225-6371.

Small Business Innovation Research (SBIR): Program Solicitation (88 pp.) and **Abstracts of Phase I Awards: 1991** (107 pp., both no charge), from the US Department of Energy, listing of a broad range of research topics for which proposals are invited for DOE's share of the SBIR program, which channels 1.25 percent of most federal agency external R&D funds to small research firms. Included are not-so-

simple instructions on how to apply. January 27, 1992, is the deadline for submissions for Phase I awards, up to \$50,000 each for six months for preparation of feasibility studies and applications. From approximately 150 Phase I awards, DOE says it will make 50-75 Phase II awards, as much as \$500,000 each for up to two years, for carrying out the research. The *Abstracts* report covers 173 Phase I awards issued in FY 1991 from 1401 responses to DOE's solicitation. Included are descriptions of the projects, the recipients, and amounts awarded.

Order from: SBIR Program Manager (ER 16), US Department of Energy, Germantown, Md. 20874; tel. 301/903-5867.

The State of Academic Science (no charge), comments from a mini-survey of 10 recent grantees of the Research Corporation, a small, elite philanthropy, founded in 1912, for the support of basic science (\$2.7 million awarded for 161 projects in 1990). The respondents, award-laden professors at major universities, express a variety of sprightly views, including: NSF's Science and Technology Centers "may actually hide inferior research," the Space Station is a "truly worthless project," and, on scientific manpower, "Many of my colleagues around the country have several years' worth of postdocs backed up because they can't get jobs." The small sampling for the survey was dictated by austerity, SGR was told. Comments from the survey fill a 15-page section of the Research Corporation's 1990 annual report.

Order from: Research Corporation, 6840 E. Broadway Blvd., Tucson, Arizona 85710-2815, Attn. Steve Bacon, Communications; tel. 602/296-6771.

HIV in the Health Care Workplace (GPO Stock No. 052-003-01268-5; 18 pp., \$1.75), by the Congressional Office of Technology Assessment (OTA), agrees with the Centers for Disease Control (CDC) that the risk of HIV transmission from health workers to patients is minuscule. OTA, however, raises the possibility that "a disincentive to seek appropriate counseling and testing" might be created by recently issued CDC guidelines. These recommend voluntary testing of health workers engaged in exposure-prone procedures, and, for those found HIV-positive, consultation with "expert panels" and patient notification. OTA states that consideration should be given to policies that "minimize the social and economic impacts" on infected health-care workers and patients and that "create 'safe harbors' from legal liability" for infected health workers "whose risk of transmitting the disease is not an issue."

Also from OTA: **Medical Monitoring and Screening in the Workplace: Results of a Survey** (GPO Stock No. 052-003-01255-3; 84 pp., \$4.50), based on a 1989 survey of 1500 companies, the 50 largest utilities, and 33 largest labor unions, OTA reports that pre-employment medical screen-

(Continued on Page 7)

